

1-89. (CANCELED)

90. (CURRENTLY AMENDED) A light emitting device, comprising:

a containment sleeve forming a housing for a light emitting element, the containment sleeve having a length greater than a width and having an opening extending axially through the containment sleeve;

a light conducting element extending axially into the containment sleeve opening, an inner end of the light conducting element and an inner circumferential surface of the containment sleeve forming a recess for receiving the light emitting element and the inner end of the light conducting element forming a light receiving boundary surface whereby light generated by the light emitting element enters the light conducting element for passage along the light conducting element; wherein

the inner circumferential surface of the containment sleeve and an outer circumferential surface of the light conducting element have essentially identical traverse section shapes and dimensions in at least a region adjacent the light emitting element and the light emitting element is located directly adjacent to and spaced apart from the light receiving boundary surface of the light conducting element and conforms within the traverse section shape and dimensions of the inner circumferential surface of the containment sleeve and the outer circumferential surface of the light conducting element; and

the axial length of the light conducting element is at least 50% of the overall axial length of the containment sleeve and light conducting element; wherein

the light emitting element, the light conducting element and the containment sleeve in at least a region adjacent the light emitting element together form a unitary optically integrated unit of essentially identical external traverse section shapes and dimensions. ◆◆

91. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, wherein the light emitting element is located within the containment sleeve closer to the light receiving boundary surface of the light conducting element than to a part of the containment sleeve remote from the light receiving boundary surface.

92. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, further incorporating a reflector located relative to the light emitting element and the light conducting element so as to reflect light from the light emitting element axially into the light conducting element by way of the light receiving boundary surface.

93. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, further incorporating a refractor located relative to the light emitting element and the light conducting element so as to refract light from the light emitting element axially into the light conducting element by way of the light receiving boundary surface.

94. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, wherein the containment sleeve and the light receiving boundary surface form a plenum about the light emitting element whereby a vacuum or an inert gas or a mixture of gases may be maintained in the plenum and about the light emitting element.

95. (CANCELED).

96. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, wherein the light emitting element comprises one or more of the following:

- a resistive filament;

- an arc;

- a discharge device;

- a solid state emitter (PN junction); and

- a coherent light source with means for light stimulation and amplification.

97. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, where the light conducting element is of fused quartz or other glass like material.

98. (PREVIOUSLY PRESENTED) The light emitting device according to claim 90, wherein the containment sleeve is of fused quartz or other glass like material.

99. (CURRENTLY AMENDED) A method of fabricating a light emitting device including a containment sleeve forming a housing for a light emitting element, the containment sleeve having a length greater than a width and having an opening extending axially through the containment sleeve, a light conducting element extending axially into the containment sleeve opening, an inner end of the light conducting element and an inner circumferential surface of the containment sleeve forming a recess for receiving the light emitting element and the inner end of the light conducting element forming a light receiving boundary surface whereby light generated by the light emitting element enters the light conducting element for passage along the light conducting element, wherein the inner circumferential surface of the containment sleeve and an outer circumferential surface of the light conducting element have essentially identical traverse section shapes and dimensions in at least a region

adjacent the light emitting element and the light emitting element is located directly adjacent to and spaced apart from the light receiving boundary surface of the light conducting element and conforms within the traverse section shape and dimensions of the inner circumferential surface of the containment sleeve and the outer circumferential surface of the light conducting element and the axial length of the light conducting element is at least 50% of the overall axial length of the containment sleeve and light conducting element, and wherein the light emitting element, the light conducting element and the containment sleeve in at least a region adjacent the light emitting element together form a unitary optically integrated unit of essentially identical external traverse section shapes and dimensions, wherein the steps comprise:

providing the light conducting element in the form of a longitudinal member with end faces and an outer surface apart from the end faces;

inserting light conducting element into a containment sleeve of greater length than the light conducting element with a first end of the light conducting element at or near one end of the containment sleeve so as to leave a length of sleeve projecting beyond the opposite end of the light conducting element and so that the opposite end of the conducting element forms the light receiving boundary surface;

forming, at least in part, a light input region by causing an inner surface of the containment sleeve to be contiguously juxtaposed with the outer surface of the light conducting element;

locating the light emitting element in the length of containment sleeve projecting beyond the opposite end of the light conducting element;

deforming the containment sleeve so as to form together with the light input region of the light conducting element a containment for the light emitting element; and

sealing the deformed length of containment sleeve to cause the containment to form a gas tight enclosure for the light emitting element.

100. (CANCELED).

101. (CURRENTLY AMENDED) A light emitting device, comprising:

a light emitter interface sleeve having an axial opening;

a light conducting element extending axially into a first portion of the sleeve opening and having a transverse face adapted to receive light into the light conducting element, and

a light emitting element located in a recess formed by the axial opening of the sleeve and adjacent the transverse face of the light conducting element, wherein

the light emitting element, the transverse face of the light conducting element and the interface sleeve together form an optically integrated unit, and

an inner surface of the recess and the transverse face of the light conducting element form an optical interface for coupling light emitted by the light emitting element into the light conducting element; the unit being of essentially identical external traverse section shapes and dimensions.

102. (PREVIOUSLY PRESENTED) A method for fabricating a light emitting device, comprising the steps of:

forming a light emitter interface sleeve having an axial opening;

forming a transverse face in an end of a light conducting element, the transverse face being adapted to receive light into the light conducting,

axially locating the transverse face of the light conducting element in the sleeve, and

axially locating a light emitting element in a recess formed by the axial opening of the sleeve and adjacent the transverse face of the light conducting element, wherein

the light emitting element, the transverse face of the light conducting element and the interface sleeve together form an optically integrated unit, and

an inner surface of the recess and the transverse face of the light conducting element form an optical interface for coupling light emitted by the light emitting element into the light conducting element.

103. (CURRENTLY AMENDED) A light emitting device, comprising:

a containment sleeve forming a housing for a light emitting element, the containment sleeve having a length greater than a width and having an opening extending axially through the containment sleeve;

a light conducting element extending axially into the containment sleeve opening, an inner end of the light conducting element and an inner circumferential surface of the containment sleeve forming a recess for receiving the light emitting element and the inner end of the light conducting element forming a light receiving boundary surface whereby light generated by the light emitting element enters the light conducting element for passage along the light conducting element; wherein

the inner circumferential surface of the containment sleeve and an outer circumferential surface of the light conducting element have essentially identical traverse section shapes and dimensions in at least a region adjacent the light emitting element and

the light emitting element is located within the containment sleeve closer to the light receiving boundary surface of the light conducting element than to a part of the containment sleeve remote from the light receiving boundary surface, and

is directly adjacent to and spaced apart from the light receiving boundary surface of the light conducting element and conforms within the traverse section shape and dimensions of the inner circumferential surface of the containment sleeve and the outer circumferential surface of the light conducting element; and wherein

the light emitting element, the containment sleeve and the light conducting element form a refracting structure to refract light from the light emitting element axially into the light conducting element by way of the light receiving boundary surface, so that

the light emitting element, the light conducting element and the containment sleeve in at least a region adjacent the light emitting element together form a unitary optically integrated unit and optical interface for coupling light emitted by the light emitting element into the light conducting element, the unit being of essentially identical external traverse section shapes and dimensions.

104. (NEW) A method of fabricating a light emitting device including a containment sleeve forming a housing for a light emitting element, the containment sleeve having a length greater than a width and having an opening extending axially through the containment sleeve, a light conducting element extending axially into the containment sleeve opening, an inner end of the light conducting element and an inner circumferential surface of the containment sleeve forming a recess for receiving the light emitting element and the inner end of the light conducting element forming a light receiving boundary surface whereby light generated by the light emitting element enters the light conducting element for passage along the light conducting element, the containment sleeve being of a similar material to the light conducting member; wherein the inner circumferential surface of the containment sleeve and an outer circumferential surface of the light conducting element have essentially identical traverse section shapes and dimensions in at least a region adjacent the light emitting element and the

light emitting element is located directly adjacent to and spaced apart from the light receiving boundary surface of the light conducting element and conforms within the traverse section shape and dimensions of the inner circumferential surface of the containment sleeve and the outer circumferential surface of the light conducting element and the axial length of the containment sleeve and light conducting element, and wherein the light emitting element, the light conducting element and the containment sleeve in at least a region adjacent the light emitting element together form a unitary optically integrated unit, the unit being of essentially identical external traverse section shapes and dimensions; wherein the steps comprise:

providing the light conducting element in the form of a longitudinal member with end faces and an outer surface apart from the end faces;

inserting light conducting element into a containment sleeve of greater length than the light conducting element with a first end of the light conducting element at or near one end of the containment sleeve so as to leave a length of sleeve projecting beyond the opposite end of the light conducting element and so that the opposite end of the conducting element forms the light receiving boundary surface;

forming, at least in part, a light input region by causing an inner surface of the containment sleeve to be contiguously juxtaposed with the outer surface of the light conducting element;

causing the inner surface of the containment sleeve and the outer surface of the light conducting element which are contiguously juxtaposed to be joined by a fusing operation;

locating the light emitting element in the length of containment sleeve projecting beyond the opposite end of the light conducting element;

deforming the containment sleeve so as to form together with the light input region of the light conducting element a containment for the light emitting element; and

sealing the deformed length of containment sleeve to cause the containment to form a gas tight enclosure or the light emitting element.

105. (NEW) A light emitting device, comprising:

a containment sleeve forming a housing for a light emitting element, the containment sleeve having a length greater than a width and having an opening extending axially through the containment sleeve;

a light conducting element extending axially into the containment sleeve opening, an inner end of the light conducting element and an inner circumferential surface of the containment sleeve forming a recess for receiving the light emitting element and the inner end of the light conducting element forming a light receiving boundary surface whereby light generated by the light emitting element enters the light conducting element for passage along the light conducting element; wherein

the inner circumferential surface of the containment sleeve and an outer circumferential surface of the light conducting element have essentially identical traverse section shapes and dimensions in at least a region adjacent the light emitting element and the light emitting element is located directly adjacent to and spaced apart from the light receiving boundary surface of the light conducting element and conforms within the traverse section shape and dimensions of the inner circumferential surface of the containment sleeve and the outer circumferential surface of the light conducting element; and

the axial length of the light conducting element is at least 50% of the overall axial length of the containment sleeve and light conducting element; wherein

the light emitting element and at least a portion of the light conducting element adjacent the light emitting element are mechanically permanently joined into a single unitary structure, and wherein

the light emitting element, the light conducting element and the containment sleeve in at least a region adjacent the light emitting element together form a unitary optically integrated unit of essentially identical external traverse section shapes and dimensions.

106. (NEW) The light emitting device according to claim 105, wherein the light emitting element is located within the containment sleeve closer to the light receiving boundary surface of the light conducting element than to a part of the containment sleeve remote from the light receiving boundary surface.

107. (NEW) The light emitting device according to claim 105, further incorporating a reflector located relative to the light emitting element and the light

conducting element so as to reflect light from the light emitting element axially into the light conducting element by way of the light receiving boundary surface.

108. (NEW) The light emitting device according to claim 105, further incorporating a refractor located relative to the light emitting element and the light conducting element so as to refract light from the light emitting element axially into the light conducting element by way of the light receiving boundary surface.

109. (NEW) A method for fabricating a light emitting device, comprising the steps of:

forming a light emitter interface sleeve having an axial opening;

forming a transverse face in an end of a light conducting element, the transverse face being adapted to receive light into the light conducting,

axially locating the transverse face of the light conducting element in the sleeve, and

axially locating a light emitting element in a recess formed by the axial opening of the sleeve and adjacent the transverse face of the light conducting element,

mechanically permanently joining the light emitting element and at least a portion of the light conducting element adjacent the light emitting element into a single unitary structure, wherein

the light emitting element, the transverse face of the light conducting element and the interface sleeve together form an optically integrated unit, and

an inner surface of the recess and the transverse face of the light conducting element form an optical interface for coupling light emitted by the light emitting element into the light conducting element.